

## SUBMISSION

2 PREAMBLE

- 3 THIS CERTIFICATE IS ISSUED ON THE BASIS OF A SAFETY ANALYSIS REPORT OF THE PACKAGE DESIGN OR APPLICATION

- #### 4 CONDITIONS

This certificate is conditional upon fulfilling the requirements of 10 CFR Part 71, as applicable, and the conditions specified below.

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(a) Packaging

- (1) Model No.: SteriGenics Eagle
- (2) Description

A stainless steel, lead shielded shipping cask for special form cobalt-60 sealed sources. The package consists of a cylindrical cask body with closure lid, and removable toroidal impact limiters, and a basket that carries and positions the cobalt-60 sealed source capsules. The packaging is constructed primarily of ASTM Type 304 stainless steel. The package is designed to transport up to 330,000 curies of cobalt-60.

The outside diameter of the cask body is approximately 37-11/16 inches. The diameter of the inner cavity is approximately 10-3/4 inches. The stainless steel inner shell has a minimum thickness of 1 inch and the stainless steel outer shell is 1 inch thick. The region between the two shells is filled with lead shielding. The closure lid and cask bottom end each consist of two stainless steel plates with lead between the two plates. The lead shielding thickness is approximately 10-3/8 inches on the side, 14-3/8 inches in the closure lid, and 11-7/8 inches on the cask bottom. The closure lid is secured by 12, 3/4-inch bolts. The closure lid is equipped with a Viton O-ring seal. The lid has a drain port and a vent port, and the cask body has a drain port. Each port is closed by a plug.

A double stainless steel thermal radiation shield is provided on the outside of the cask body in the region between the two impact limiters. The inner thermal shield is about 3/4-inches thick and is radially separated from the cask outer shell by 12 gauge spacers at each end. The outer shield is a sheet of 10 gauge material separated from the inner shield by a spiral wrap of 12 gauge wire.

**CERTIFICATE OF COMPLIANCE  
FOR RADIOACTIVE MATERIAL PACKAGES**

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5.(a) (2) Description (continued)

The top and bottom impact limiters are toroidal stainless steel shells. They are attached to either end of the cask body using 12, 1-inch diameter ball-lock pins orientated radially around the cask body. One pin on each limiter is installed with a lockwire to provide a tamper-indicating device.

The cask lifting attachments thread into the upper cask body. The cask lid is also equipped with removable lid-lifting attachments. The cask rests on a steel pallet and is held down to the pallet by means of a steel frame placed on the top impact limiter. This steel frame is used to tie the cask to the conveyance. The maximum weight of the package, including contents is 20,000 lbs.

The approximate dimension and weights of the package are as follows:

Cask Body Outer Diameter	37-11/16 inches
Cask Body Height	49-7/8 inches
Cask Cavity Inner Diameter	10-3/4 inches
Cask Cavity Inner Height	19 inches
Lead Shield Sidewall Thickness	10-3/8 inches
Overall Package Dimension	
Diameter at Impact Limiters	60 inches
Diameter at Body	37-11/16 inches
Height with Impact Limiters	76 inches
Maximum Contents Weight	50 pounds
Maximum Package Weight (Including Contents)	20,000 pounds

(3) Drawings

The packaging is constructed and assembled in accordance with Packaging Technology, Incorporated, Drawing No. 98003-SAR, Rev.1, Sheets 1 through 8.

(b) Contents

(1) Type and form of material

Cobalt-60 as sealed sources that meet the requirements of special form radioactive material.

(2) Maximum quantity of material per package:

330,000 curies. Not to exceed 18,400 curies per special form source.

COMMISSION

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6. In addition to the requirements of Subpart G of 10 CFR Part 71:
- (a) The package shall be prepared for shipment and operated in accordance with the Operating Procedures in Chapter 7.0 of the application, as supplemented.
  - (b) Each packaging must meet the Acceptance Tests and Maintenance Program of Chapter 8.0 of the application, as supplemented.
7. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR §71.17, provided the fabrication of the package was satisfactorily completed by December 31, 2006.
8. Revision No. 1 of this certificate may be used until December 31, 2008.
9. Expiration date: December 31, 2009.

REFERENCES

Packaging Technology, Inc., application dated November 18, 1998.

Supplements dated: August 20, 1999, November 29, 2004, and November 26, 2007.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



Robert A. Nelson, Chief  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Date: January 1, 2008



## **SAFETY EVALUATION REPORT**

**Docket No. 71-9287**  
**Model No. SteriGenics Eagle**  
**Certificate of Compliance No. 9287**  
**Revision No. 2**

### **SUMMARY**

By application dated November 26, 2007, Packaging Technology, Inc., and AREVA Federal Systems, LLC, jointly requested an amendment to Certificate of Compliance (CoC) No. 9287, for the Model No. SteriGenics Eagle transportation package. The applicants requested that this CoC be transferred from Packaging Technology, Inc., to AREVA Federal Services, LLC, effective January 1, 2008.

### **EVALUATION**

By application dated November 26, 2007, Packaging Technology, Inc., and AREVA Federal Systems, LLC (hereinafter, AREVA), jointly requested that CoC No. 9287 for the Model No. SteriGenics Eagle transportation package be transferred from Packaging Technology, Inc., to AREVA effective January 1, 2008. The applicants stated that Packaging Technology will commence doing business as AREVA on that date. AREVA stated that it accepts responsibility for the completeness and accuracy of the statements and representations in the safety analysis report (SAR) for this docket. In addition, AREVA stated that it will maintain the CoC, SAR, and, in cases where packages have been fabricated, the quality assurance records. The staff has verified that AREVA received Quality Assurance Program Approval No. 0938, Rev 0, on October 11, 2007, as stated in its application. Therefore, the name in paragraph 3.a of the CoC was changed as requested.

Condition No. 7 was revised to add the requirement to authorize the use of only those packages whose fabrication was satisfactorily completed by December 31, 2006, as required by 10 CFR 71.19.(c)(1).

The certificate was revised to include Condition No. 8 which authorizes use of the previous revision of the certificate for a period of approximately one year.

### **CONCLUSION**

The CoC has been revised to state that the CoC holder is AREVA Federal Services, LLC. This change does not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Issued with CoC No. 9287, Rev. 2 on January 1, 2008.